

SEQUENCE LISTING

<110> The Regents of the University of California
Wise, Arlene

<120> Detection Of Phenols Using Engineered Bacteria

<130> S-91,714

<140> 09/520,538

<141> 2000-03-08

<160> 17

<170> PatentIn version 3.0

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<212> DNA

<213> Pseudomonas sp. CF600

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gccaagggct tgttcctgcg ccatggttac cagtccggcc tgaaggatgc cgaactggcc	240
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tcactcaagg gtctggtcaa ggtccgcccc accgagctcg atatcgacaa ggaatacggg	360
cgcttctatg ccgagatgga gtggatcgac tggttcgagg tggaaatctg ccagaccgac	420
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gccaagggct tgttcctgcg ccatggttac cagtccggcc tgaaggatgc cgaactggcc	240
aggaagctga gaccgaatgc cagcgaagtc ggcatgttcc tcgctgggccc gcagatgcat	300

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ctggggcaga tgcaagaccc ggtgtgctgg actgtgctcg gctacgcctg cgcctattcc	480
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gccaaagggct tgttcctgcg ccatggttac cagtccggcc tgaaggatgc cgaactggcc	240
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ctggggcaga tgcaagaccc ggtgtgctgg actgtgctcg gctacgcctg cgcctattcc	480
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 Gly Glu Gln Arg Met Leu Leu Leu Gln Ser Ser Ala Met Ala Ser Phe
 35 40 45
 Arg Arg Glu Met Val Asn Thr Leu Gly Ile Glu Arg Ala Lys Gly Leu
 50 55 60
 Phe Leu Arg His Gly Tyr Gln Ser Gly Leu Lys Asp Ala Glu Leu Ala
 65 70 75 80
 Arg Lys Leu Arg Pro Asn Ala Ser Glu Val Gly Met Phe Leu Ala Gly
 85 90 95
 Pro Gln Met His Ser Leu Lys Gly Leu Val Lys Val Arg Pro Thr Glu
 100 105 110
 Leu Asp Ile Asp Lys Glu Tyr Gly Arg Phe Tyr Ala Glu Met Glu Trp
 115 120 125
 Ile Asp Ser Phe Glu Val Glu Ile Cys Gln Thr Asp Leu Gly Gln Met
 130 135 140
 Gln Asp Pro Val Cys Trp Thr Leu Leu Gly Tyr Ala Cys Ala Tyr Ser
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Ser Ala Phe Met Gly Arg Glu Ile Ile Phe Lys Glu Val Ser Cys Arg
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Gly Cys Gly Gly
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Met Pro Ile Lys Tyr Lys Pro Glu Ile Gln His Ser Asp Phe Lys Asp
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Leu Thr Asn Leu Ile His Phe Gln Ser Met Glu Gly Lys Ile Trp Leu
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Gly Glu Gln Arg Met Leu Leu Leu Gln Phe Ser Ala Met Ala Ser Phe
35 40 45

Arg Arg Glu Met Val Asn Thr Leu Gly Ile Glu Arg Ala Lys Gly Leu
50 55 60

Phe Leu Arg His Gly Tyr Gln Ser Gly Leu Lys Asp Ala Glu Leu Ala
65 70 75 80

Arg Lys Leu Arg Pro Asn Ala Ser Glu Val Gly Met Phe Leu Ala Gly
85 90 95

Pro Gln Met His Ser Leu Lys Gly Leu Val Lys Val Arg Pro Thr Gly
100 105 110

Leu Asp Ile Asp Lys Glu Tyr Gly Arg Phe Tyr Ala Glu Met Glu Trp
115 120 125

Ile Asp Ser Phe Glu Val Glu Ile Cys Gln Thr Asp Leu Gly Gln Met
130 135 140

Gln Asp Pro Val Cys Trp Thr Leu Leu Gly Tyr Ala Cys Ala Tyr Ser
145 150 155 160

Ser Ala Phe Met Gly Arg Glu Ile Ile Phe Lys Glu Val Ser Cys Arg
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Gly Cys Gly Gly
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Gly Glu Gln Arg Met Leu Leu Leu Gln Phe Ser Ala Met Ala Ser Phe	35	40	45
Arg Arg Glu Met Val Asn Thr Leu Gly Ile Glu Arg Ala Lys Gly Leu	50	55	60
Phe Leu Arg His Gly Tyr Gln Ser Gly Leu Lys Asp Ala Glu Leu Ala	65	70	75
Arg Lys Leu Arg Pro Asn Ala Ser Glu Val Gly Met Phe Leu Ala Gly	85	90	95
Pro Gln Met His Ser Leu Lys Gly Leu Val Lys Val Arg Pro Thr Glu	100	105	110
Leu Asp Ile Asp Met Glu Tyr Gly Arg Phe Tyr Ala Glu Met Glu Trp	115	120	125
Ile Asp Ser Phe Glu Val Glu Ile Cys Gln Thr Asp Leu Gly Gln Met	130	135	140
Gln Asp Pro Val Cys Trp Thr Leu Leu Gly Tyr Ala Cys Ala Tyr Ser	145	150	155
Ser Ala Phe Met Gly Arg Glu Ile Ile Phe Lys Glu Val Ser Cys Arg	165	170	175
Gly Cys Gly Gly	180		

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Met Pro Ile Lys Tyr Lys Pro Glu Ile Gln His Ser Asp Phe Lys Asp	1	5	10	15
Leu Thr Asn Leu Ile His Phe Gln Ser Met Glu Gly Lys Ile Trp Leu	20	25	30	
Gly Glu Gln Arg Met Leu Leu Leu Gln Phe Ser Ala Met Ala Ser Phe	35	40	45	
Arg Arg Glu Met Val Asn Thr Leu Gly Val Glu Arg Thr Lys Gly Leu	50	55	60	
Phe Leu Arg His Gly Tyr Gln Ser Gly Leu Lys Asp Ala Glu Leu Ala	65	70	75	80

Arg Lys Leu Arg Pro Asn Ala Ser Glu Val Gly Met Phe Leu Ala Gly
85 90 95

Pro Gln Met His Ser Leu Lys Gly Leu Val Lys Val Arg Pro Thr Glu
100 105 110

Leu Asp Ile Asp Lys Glu Tyr Gly Arg Phe Tyr Ala Glu Met Glu Trp
115 120 125

Ile Asp Ser Phe Glu Val Glu Ile Cys Gln Thr Asp Leu Gly Gln Met
130 135 140

Gln Gly Pro Val Cys Trp Thr Leu Leu Gly Tyr Ala Cys Ala Tyr Ser
145 150 155 160

Ser Ala Phe Met Gly Arg Glu Ile Ile Phe Lys Glu Val Ser Cys Arg
165 170 175

Gly Cys Gly Gly
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Leu Thr Asn Leu Ile His Pro Gln Ser Met Glu Gly Lys Ile Trp Leu
20 25 30

Gly Glu Gln Arg Met Leu Leu Leu Gln Phe Ser Ala Met Ala Ser Phe
35 40 45

Arg Arg Glu Met Val Asn Thr Leu Gly Ile Glu Arg Ala Lys Gly Leu
50 55 60

Phe Leu Arg His Gly Tyr Gln Ser Gly Leu Lys Asp Ala Glu Leu Ala
65 70 75 80

Arg Lys Leu Arg Pro Asn Ala Ser Glu Val Gly Met Phe Leu Ala Gly
85 90 95

Pro Gln Met His Ser Leu Lys Gly Leu Val Lys Val Arg Pro Thr Glu
100 105 110

Leu Asp Ile Gly Arg Glu Tyr Gly Arg Phe Tyr Ala Glu Met Glu Trp
115 120 125

Ile Asp Ser Pro Glu Val Glu Ile Cys Gln Thr Asp Leu Gly Gln Met
130 135 140

Gln Asp Pro Val Cys Trp Thr Leu Leu Gly Tyr Ala Cys Ala Tyr Ser
145 150 155 160

Ser Ala Leu Met Gly Arg Glu Ile Ile His Lys Glu Val Ser Cys Arg
165 170 175

Gly Cys Gly Gly
180

<210> 13
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<213> Pseudomonas sp. CF600

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Met Pro Ile Lys Tyr Lys Pro Glu Ile Gln His Ser Asp Phe Lys Asp
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Leu Thr Asn Leu Ile His Pro Gln Ser Met Glu Gly Lys Ile Trp Leu
20 25 30

Gly Glu Gln Arg Met Leu Leu Leu Gln Phe Ser Ala Met Ala Ser Phe
35 40 45

Arg Arg Glu Met Val Asn Thr Leu Gly Ile Glu Arg Ala Lys Gly Leu
50 55 60

Phe Leu Arg His Gly Tyr Gln Ser Gly Leu Lys Asp Ala Glu Leu Ala
65 70 75 80

Arg Lys Leu Arg Pro Asn Ala Ser Glu Val Gly Met Phe Leu Ala Gly
85 90 95

Pro Gln Met His Ser Leu Lys Gly Leu Val Lys Val Arg Pro Thr Glu
100 105 110

Leu Asp Ile Asp Lys Glu Tyr Gly Arg Phe Tyr Ala Glu Met Glu Trp
115 120 125

Ile Asp Ser Phe Glu Val Glu Ile Cys Gln Thr Asp Pro Gly Gln Met
130 135 140

Gln Asp Pro Val Cys Trp Thr Leu Leu Gly Tyr Ala Cys Ala Tyr Ser
145 150 155 160

Ser Ala Phe Met Gly Arg Glu Ile Ile Phe Lys Glu Val Ser Cys Arg
165 170 175

Gly Cys Gly Gly
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ccgtcgattg atcatttgg 19

<210> 17
<211> 20
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